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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,242	04/10/2001	Edwin Dair	3918P002XX6	3707

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EXAMINER

BELLO, AGUSTIN

ART UNIT PAPER NUMBER

2633

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/833,242

Applicant(s)

DAIR ET AL.

Examiner

Agustin Bello

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) 10-20, 29-31, 36, 38-50 and 60-70 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 22-28, 32-35, 37, 51-59, 71 and 72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/2/04, 5/17/04, 5/20/02
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species I in the reply filed on 9/24/04 is acknowledged. However, contrary to the applicant's assertion, claims 29-31 do not read on the elected species. Claims 29-31 claim a plurality of optical blocks while the elected Figures show only a single block. Furthermore, claim 36 also claims subject matter which is not shown in elected species I, namely a through hole mount configuration.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the ground plane on the printed circuit boards must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted

Art Unit: 2633

by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 5-9, 22, 26-28, 32-34, 37, 51, 55-59, and 71-72 are rejected under 35

U.S.C. 102(e) as being anticipated by Buckholz (U.S. Patent No. 5,943,456).

Regarding claims 1, 22, and 51, Buckholz teaches a base (reference numeral 58 in Figure 3); a back plane (reference numeral 60 in Figure 3) including a host connector (reference numeral 62 in Figure 3) to couple to plurality of edge connectors (reference numeral 64 in Figure 3) and a host system; a plurality of printed circuit boards (reference numeral 65 in Figure 3) each having an edge connector (reference numeral 64 in Figure 3) and an optoelectronic device (reference numeral 69 in Figure 3) coupled thereto in parallel to the optical axis of the optoelectronic device, the plurality of printed circuit boards each having its respective edge connector coupled to the respective edge connector of the back plane (as seen in Figure 3); and shielded housing (reference numeral 54, 56 in Figure 3) coupled to the base to encase the plurality of printed circuit boards to reduce electromagnetic interference (EMI).

Regarding claims 5, 26, and 55, Buckholz teaches the back plane includes traces between the plurality of edge connectors and the host connector (inherent).

Regarding claims 6, 7, 27, 28, 56, and 57 Buckholz teaches that the host connector is a plurality of pins (inherent).

Regarding claims 8, 9, 37, 58, and 59 Buckholz teaches a plurality of vertical printed circuit boards that form a horizontal array of fiber optical channels (see Figure 3).

Regarding claims 21, 33, 34, and 71, Buckholz teaches that each of the plurality of circuit boards includes a ground plane on one side (reference numeral 2 in Figure 1).

Regarding claim 32, Buckholz teaches that the housing is a shielded housing which is conductive (reference numeral 50 in Figure 3).

Regarding claim 72, Buckholz teaches each of the edge connectors of the plurality of printed circuit boards includes one or more staggered pads to plug in the printed circuit board when the fiber optic module is hot (inherent).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-4, 23-25, 35, and 52-54, are rejected under 35 U.S.C. 103(a) as being unpatentable over Buckholz.

Regarding claims 2, 23, and 52, Buckholz teaches an optical block (reference numeral 52 in Figure 3) coupled to each of the optoelectronic devices of the plurality of printed circuit boards, the optical block having a plurality of openings (reference numeral 68 in Figure 3) to receive each of the optoelectronic devices of the plurality of printed circuit boards. Buckholz

Art Unit: 2633

differs from the claimed invention in that Buckholz fails to specifically teach a plurality of lenses to couple photons between each of the optoelectronic devices of the plurality of printed circuit boards and a plurality of optical fibers respectively. However, the use of lenses in optical communication modules is well known in the art. One skilled in the art would have been motivated to include lenses in the system of Buckholz in order to improve the coupling efficiency between the optoelectronic devices and the plurality of optical fibers. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include lenses in the system of Buckholz.

Regarding claims 3, 24, and 53, Buckholz teaches a nose (reference numeral 69 in Figure 3) to receive an optical fiber connector and hold the plurality of optical fibers substantially fixed and aligned with the plurality of openings of the optical block.

Regarding claims 4, 25, and 54, Buckholz teaches a nose shield (reference numeral 66, 69 in Figure 3) surrounding the nose to reduce electromagnetic interference.

Regarding claim 35, Buckholz differs from the claimed invention in that Buckholz fails to specifically teach that each optoelectronic device of the plurality of vertical printed circuit boards is coupled thereto using a straddle mount configuration. However, straddle mounting of optoelectronic devices is very well known in the art. One skilled in the art would have been motivated to couple the optoelectronic devices of Buckholz using a straddle mount in order to reduce the overall profile of the board and optoelectronic device. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to couple the optoelectronic devices of Buckholz using a straddle mount.

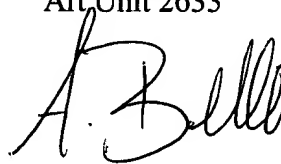
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Agustin Bello
Examiner
Art Unit 2633

A handwritten signature in black ink, appearing to read 'A. Bello', written over the printed name and title.

AB